

Figure 1

I

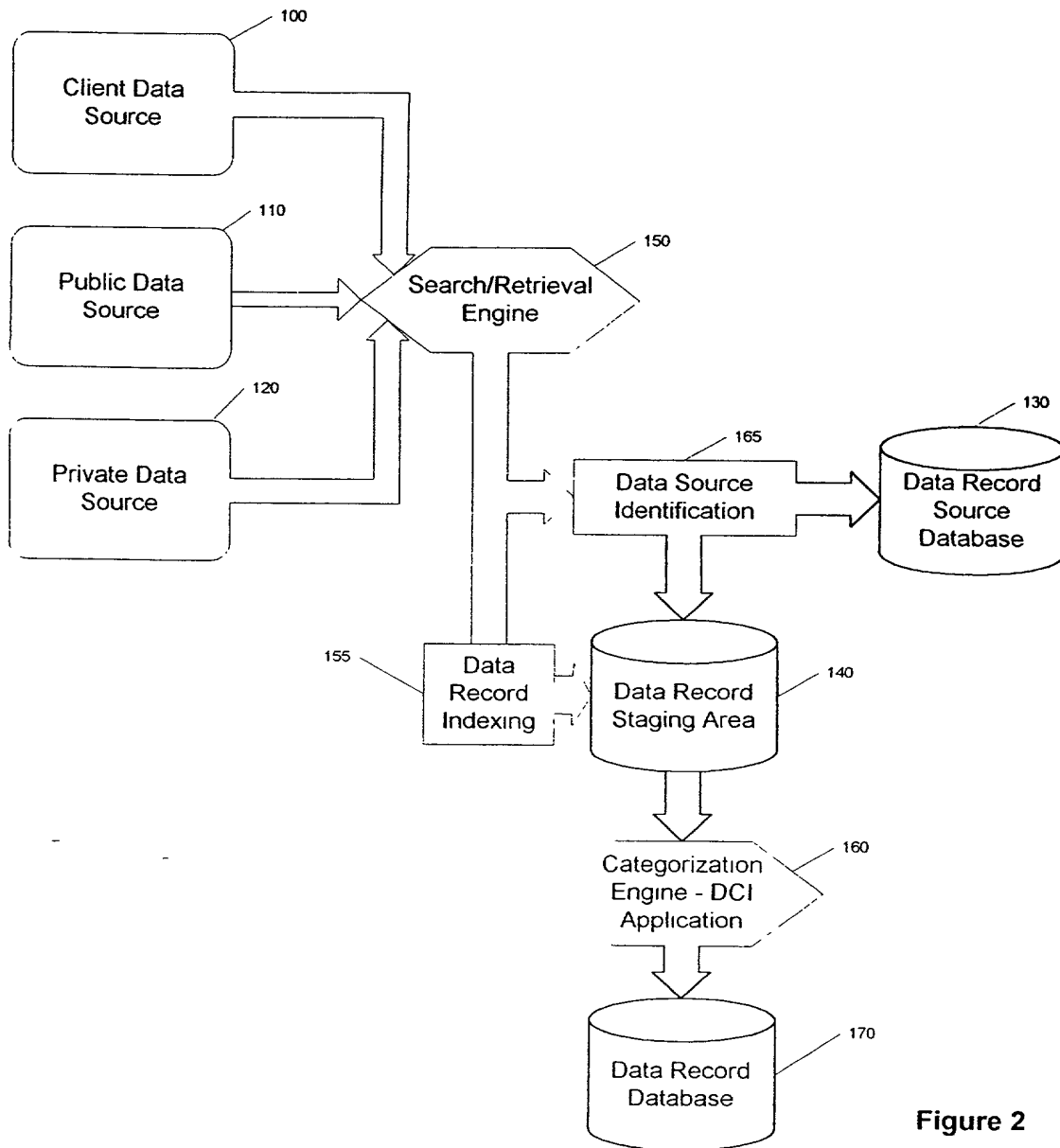


Figure 2



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II

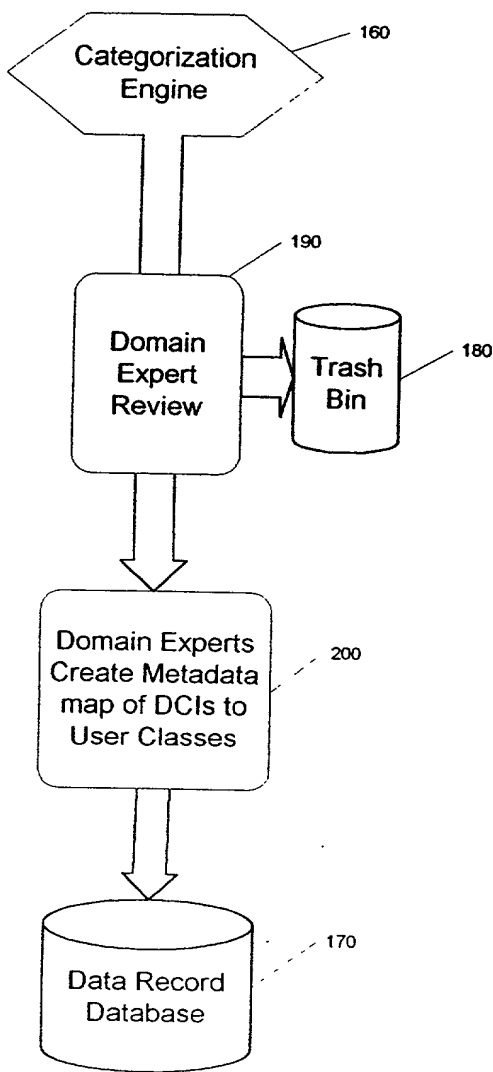


Figure 3



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Exemplary Data Record



2502 Wilson Blvd., Arlington, VA 22201-3634

State Mercury-Containing Product Legislation

Summary

States have enacted or introduced legislation that would require the labeling, collection, or phase-out of mercury-containing products, such as mercury-containing lamps. EIA opposes such legislation because the amount of mercury used in electronic applications is so small that regulating such uses would have a negligible impact on reducing mercury releases to the environment.

Background

Some electronic products, such as laptop computers, digital cameras, flat panel televisions, and copier and fax machines, include mercury-containing lamps for illumination and energy efficiency. Currently, there is no cost-effective alternative to mercury-containing lamps in electronic products. The amount of mercury in these lamps is very small and is usually measured in micrograms.

States have introduced and, in some cases, enacted legislation to require the labeling, collection, and/or phase-out of certain mercury-containing products. The stated goal of such legislation is to reduce the amount of mercury entering the environment when mercury-containing products are disposed of in landfills and through incineration. States that have enacted mercury legislation include Minnesota, Vermont, New Hampshire, and Maine. States that have or are considered enacting legislation include New York, Rhode Island, and Connecticut. The Northeast Waste Management Officials' Association (NEWMOA) recently drafted "model" mercury legislation that it hopes will trigger the enactment of region-wide mercury legislation.

Emissions from coal-fired electric power plants and other combustion sources represent the largest source category of mercury emissions to the environment (87%). Of the other sources, only 10% of mercury emissions to the environment can be attributed to manufacturing sources. Of that small fraction, less than 0.1% of mercury emissions is attributed to all electrical applications – a category which includes all lamps and electrical lights – not just lamps used in electronic applications. If legislation succeeds in banning or regulating the use of mercury in electronics, it will have a negligible impact on the total amount of mercury released to the environment yet impose large costs on the industry and, in turn, on consumers.

EIA Position

EIA opposes legislation that would regulate or ban the use of mercury in electronic applications. Although the stated goal of proposed legislation is to reduce mercury emissions to the environment, there is no evidence that regulating or banning the use of mercury in electronics would achieve that goal. In fact, due to the energy efficiency benefits associated with the use of mercury lamps, regulating or banning such uses may result in greater mercury releases to the environment since more mercury releases from coal-fired electric power plants may result. In order to demonstrate its commitment to ensuring the proper end-of-life management of electronic products, EIA and its members have developed a Consumer Education Initiative (CEI), which will inform consumers about voluntary electronic recycling programs.

Outlook

It is likely that states will continue to introduce legislation to regulate or ban the use of mercury in electronic applications. Such legislation will not achieve its intended goal of reducing mercury releases to the environment. As an alternative, EIA will promote its Consumer Education Initiative (CEI), which will encourage consumers to properly manage and recycle used electronics.

Exemplary Document Content

Identifiers

DCI₁ = Electronics Industry,
DCI₂ = Mercury,
DCI₃ = Toxics Reduction

Figure 4



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Exemplary User Class Metadata Map

UC₁

DCI₁ = ISS_GreenhouseGases
DCI₂ = EST_ResourceOptimization_EnergySystems_CarbonManagement
DCI₃ = EST_ResourceOptimization_EnergySystems_CarbonTrading
.....
DCI_N = EST_ResourceOptimization_EnergySystems_DistributedGeneration

wherein UC₁ represents Greenhouse Gas Managers

Figure 5



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System 1

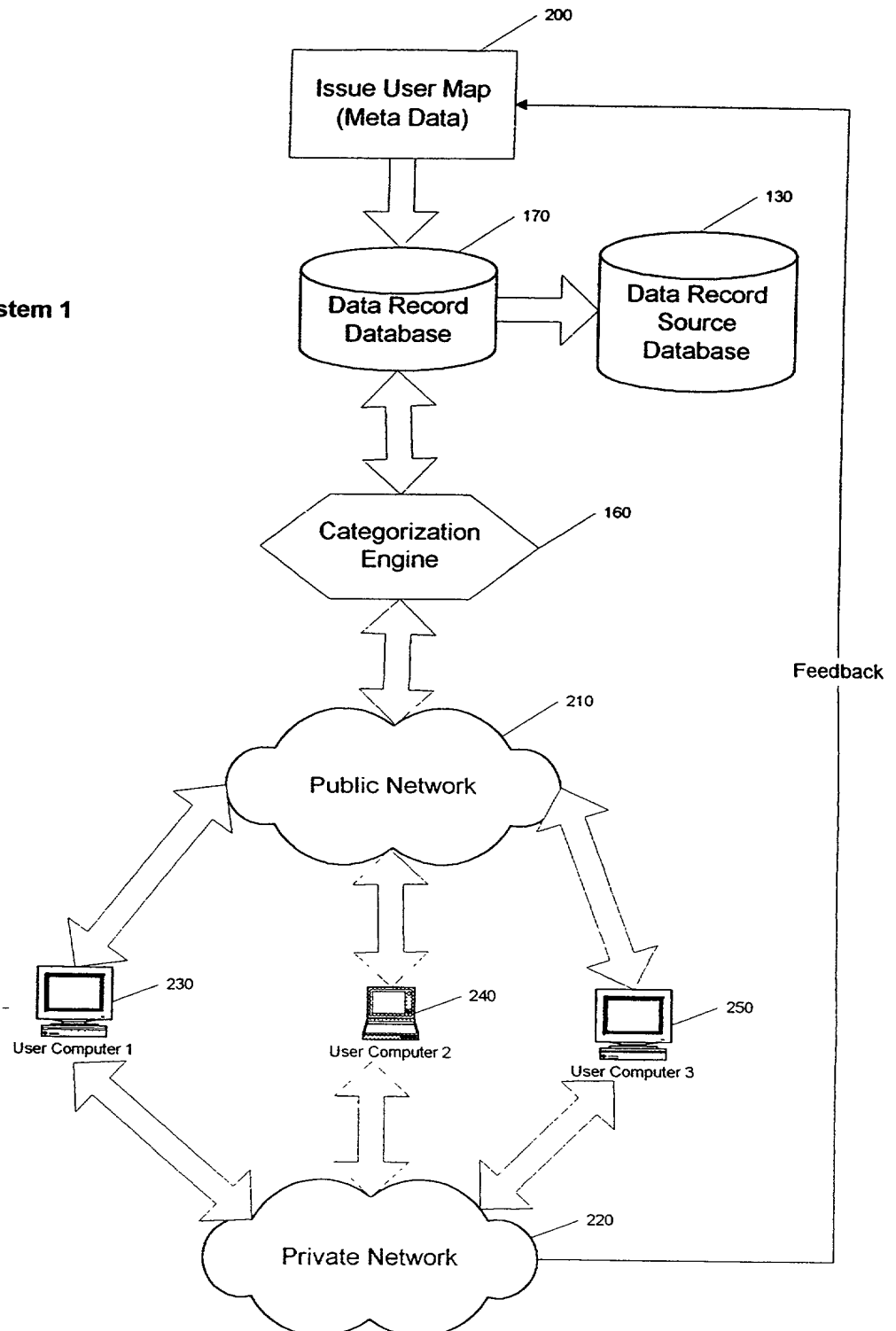


Figure 6



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Prior Art

User	No. of Searches
User 1	
User 2	
User 3	
.....	
.....	
User N	

Total number = SN X N X M

(a)

Present Invention

User	No. of Searches
System	

Total number = M

(b)

Figure 7